PRACTICAL DESIGN AT WORK - DESIGN





Washington State
Department of Transportation

US 12 Rochester vicinity safety improvements

Background

US 12 east of Interstate 5 is a popular route travelers take over White Pass to get from one side of the state to the other. But for residents living off US 12 west of I-5 in areas such as Grand Mound and Rochester, the at-grade intersections from this busy two-lane highway to local roads are less than ideal. Over the years, inattentive or impaired drivers have caused numerous rear-end collisions with vehicles turning from US 12 to local roads. In 2013, area residents brought forward a community-organized petition to WSDOT, requesting safety improvements to the highway.

Original plan

In October 2013, residents in Rochester asked WSDOT through the petition to widen US 12 to a three or fourlane highway with wide shoulders. Residents also asked the agency to install left-turn lanes on US 12 at the intersections of Denmark Street and Pecan Street, and to do so in a timely manner. WSDOT estimated the cost of fully widening the highway with four lanes and full-width shoulders at 1.2 million. This option was not possible due to current funding constraints. Because US 12 does not have full-width shoulders, WSDOT did not have the room to consider quickly restriping the roadway to include a left-turn lane.

Practical design solution

WSDOT moved forward with a traffic study and corridor safety analysis and worked with the Washington State Patrol to find a cost-effective and timely practical design solution. Three safety enhancements were identified that could be quickly implemented at reasonable cost. In December 2013, WSDOT crews installed rumble strips in both directions of US 12 approaching Pecan and Denmark Streets. WSDOT permanently reduced the speed limit from 55 miles per hour to 50 miles per hour along a three-mile section of US 12 between Grand Mound and Rochester. In coordination with the reduced speed limits, crews also installed advanced signs on US 12 warning drivers of the approaching intersections. In addition to these safety enhancements, WSDOT is moving forward in designing and constructing a left-turn lane in the summer of 2014.

Results

Safety: The rumble strips and advance signing enhanced awareness for drivers approaching the two popular intersections. Over the next year, WSDOT will monitor the area to determine how these safety improvements affect driver behavior. In addition, WSDOT will construct a modified left turn lane at the intersection of US 12 and Pecan Street. Work crews will widen the shoulders at Pecan Street and restripe the area to include left-turn lanes. This work is expected to occur in the summer of 2014.

Community coordination: WSDOT responded to community concerns with immediate action. Based on data and analysis, staff formulated a plan that included several cost-efficient safety improvements that were quickly implemented. The community responded



Back filling rumble strips with plastic west of Pecan Street SW.

with thanks and positive feedback for the changes. Since the rumble strips were installed, WSDOT crews have returned twice to modify their depth to reduce noise. The action was in response to continual community feedback.

Cost: The initial cost to fully widen US 12 with four lanes and traditional left turn lanes was \$1.2 million. This option was not possible due to budget constraints, nor was it a quick solution. WSDOT was able to quickly provide low-cost safety improvements for less than \$10,000. The modified left-turn lane at Pecan Street and US 12, scheduled to be constructed in 2014, has a cost estimate of under \$60,000.



WSDOT crews installed reduced speed limit signs along a three mile section of US 12 near Rochester.